

IN THE CLAIMS

1. (Currently amended) An electron-emitting device, comprising:

a cathode electrode and a gate electrode, which are ~~formed~~ located on a surface of a substrate and opposed to each other with a space therebetween; and

a film containing an electron-emitting material, which is located on the cathode electrode,

wherein the film ~~containing the electron-emitting material~~ has two end portions, which are located in a plane substantially parallel to the surface and are located in a direction substantially perpendicular to a direction along in which the cathode electrode and the gate electrode are opposed to each other,

wherein at least one of the cathode electrode and the gate electrode ~~has a structure is used in which for making~~ electric field strengths applied between each of the two end portions ~~of the film containing the electron-emitting material~~ and the gate electrode ~~are made~~ weaker than an electric field strength applied between a region between the two end portions ~~of the film containing the electron-emitting material~~ and the gate electrode, at a time of driving.

2. (Currently amended) An electron-emitting device, comprising:

a cathode electrode and a gate electrode, which are ~~formed~~ located on a surface of a substrate and opposed to each other with a space therebetween; and

a film containing an electron-emitting material, which is located on the cathode electrode,

wherein the film containing the electron-emitting material has two end portions, which are located in a plane substantially parallel to the surface of the substrate and are located in a direction substantially perpendicular to a direction along in which the cathode electrode and the gate electrode are opposed to each other,

wherein an area of a portion of the cathode electrode which is located between each of the two end portions of the film containing the electron-emitting material and the gate electrode in the plane substantially parallel to the surface of the substrate is larger than an area of a portion of the cathode electrode which is located between a region located between the two end portions of the film containing the electron-emitting material and the gate electrode.

3. (Currently amended) An electron-emitting device, comprising:
a cathode electrode and a gate electrode, which are formed located on a surface of a substrate and opposed to each other with a space therebetween; and
a film containing an electron-emitting material, which is located on the cathode electrode,

wherein the film containing the electron-emitting material has two end portions, which are located in a plane substantially parallel to the surface of the substrate and are located in a direction substantially perpendicular to a direction along which the cathode electrode and the gate electrode are opposed to each other,

wherein the cathode electrode has protruding portions in areas between each of the two end portions of the film containing the electron-emitting material

and the gate electrode in a plane substantially parallel to the surface of the substrate, the protruding portions protruding more to the gate electrode side as compared with an area between a region located between the two end portions of the film containing the electron-emitting material and the gate electrode.

4. (Currently amended) An electron-emitting device, comprising:
a cathode electrode and a gate electrode, which are ~~formed~~ located on a surface of a substrate and opposed to each other with a space therebetween; and
a film containing an electron-emitting material, which is located on the cathode electrode,

wherein the film containing the electron-emitting material has two end portions, which are located in a plane substantially parallel to the surface of the substrate and are located in a direction substantially perpendicular to a direction along in which the cathode electrode and the gate electrode are opposed to each other,
wherein the gate electrode has a shape in which a distance therefrom to a region located between the two end portions of the film containing the electron-emitting material is shorter than a distance therefrom to each of the two end portions of the film containing the electron-emitting material.

5. (Currently amended) An electron-emitting device, comprising:
a cathode electrode and a gate electrode, which are ~~formed~~ located on a surface of a substrate and opposed to each other with a space therebetween; and

a film containing an electron-emitting material, which is located on the cathode electrode,

wherein the film ~~containing the electron-emitting material~~ has two end portions, which are located in a plane substantially parallel to the surface ~~of the substrate and are located~~ in a direction substantially perpendicular to a direction along which the cathode electrode and the gate electrode are opposed to each other,

wherein a distance from a center line between the cathode electrode and the gate electrode to a region located between the two end portions of the film containing the electron-emitting material is shorter than a distance from the center line to each of the two end portions of the film ~~containing the electron-emitting material~~.

6. (Currently amended) An electron-emitting device according to claim 1, wherein the film ~~containing the electron-emitting material~~ comprises a plurality of fibrous conductive materials.

7. (Currently amended) An electron-emitting device according to claim 1, wherein the film ~~containing the electron-emitting material~~ contains mainly carbon.

8. (Currently amended) An electron-emitting device according to claim 1, wherein the film ~~containing the electron-emitting material~~ comprises a plurality of carbon fibers.

9. (Previously Presented) An electron-emitting device according to claim 8, wherein each of the plurality of carbon fibers includes at least one of a carbon nanotube, a graphite nanofiber, an amorphous carbon fiber, and a diamond fiber.

10. (Currently Amended) An electron source, comprising:
a plurality of electron-emitting devices, each of which is constructed according to ~~any one of claims~~ claim 1.

11. (Previously Presented) An image display apparatus, comprising:
an electron source constructed according to claim 10; and
a light emitting member.

12. (New) An electron-emitting device according to claim 2, wherein the film is composed of a plurality of carbon fibers.

13. (New) An electron-emitting device according to claim 3, wherein the film is composed of a plurality of carbon fibers.

14. (New) An electron-emitting device according to claim 4, wherein the film is composed of a plurality of carbon fibers.

15. (New) An electron-emitting device according to claim 5, wherein the film is composed of a plurality of carbon fibers.

16. (New) An image display apparatus, comprising:
a plurality of electron emitting devices, each of which is an electron-emitting device according to claim 12; and
a light emitting member.

17. (New) An image display apparatus, comprising:
a plurality of electron emitting devices, each of which is an electron-emitting device according to claim 13; and
a light emitting member.

18. (New) An image display apparatus, comprising:
a plurality of electron emitting devices, each of which is an electron-emitting device according to claim 14; and
a light emitting member.

19. (New) An image display apparatus, comprising:
a plurality of electron emitting devices, each of which is an electron-emitting device according to claim 15; and
a light emitting member.